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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/654,889	09/05/2003	Yoshitaka Saita	242453US2	6639

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1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

GOUDREAU, GEORGE A

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/654,889

Applicant(s)

SAITA ET AL.

Examiner

George A. Goudreau

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


GEORGE GOUDREAU
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102

that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by

Inazawa et. al. (5,595,627).

Inazawa et. al. disclose a parallel, plate rie etching apparatus, which can be used to rie etch a substrate. The apparatus is equipped with means for supplying three different process gasses to the substrate to be etched via a showerhead type anode structure. This is discussed specifically in columns 3-9; and discussed in general in columns 1-12. This is shown in figures 1-10

As to applicant's recitation of the conduction of a specific type of etching process in their apparatus claims, the examiner cites the case law listed below of interest to the applicant in this regard.

Furthermore, it is obvious to one skilled in the art that the configuration of the substrate worked upon by the apparatus claimed in this invention is not patentable in view of In re Young (25 U.S.P.Q. 69, 71 (CCPA 1935)) and In re Rishoi (94 U.S.P.Q. 71,73 (CCPA 1952)). The Court of Customs and Patent Appeals stated in In re Young that inclusion of material worked upon by a machine as element in claim may not lend patentability since claim is not otherwise allowable. Similarly, the Court of Customs and Patent Appeals stated in In re Rishoi that there is no patentable combination between a device and the material upon which it works.

Thus, it is irrelevant that Inazawa et. al. does not specifically teach the conduction of the specific etching process which is claimed by the applicant in their apparatus claims since the apparatus taught above is inherently capable of conducting

the etching process, which is taught above, and all other claimed subject matter, is disclosed in this reference.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koh et. al. (JP 2002-319,569).

Koh et. al. disclose a process for anisotropically rie etching a polysi layer on a wafer in a plasma which is comprised of (Cl₂-O₂-NF₃) using a patterned photo resist etch mask. They employ a parallel plate, rie etcher in which the anode, and cathode are biased with separate RF power sources (40, 50). The plasma etchant mixture is supplied to the plasma etcher via a showerhead type anode structure which is located above the wafer to be rie etched. This is discussed specifically in the abstract; and discussed in general in columns 1-10. This is shown in figures 1-5. Koh et. al. fail, however, to specifically disclose the following aspects of applicant's claimed invention:

-the specific conduction of an etching process which employs the specific etch process parameters which are claimed by the applicant

It would have been prima facie obvious to one skilled in the art to employ any of a variety of different etch process parameters in the etching process taught above including those which are specifically claimed by the applicant. These are all well known variables in the plasma etching art, which are known to effect both the rate and the quality of the plasma etching process. Further, the selection of particular values for these variables would not necessitate any undo experimentation, which would have been indicative of unexpected results.

Alternatively, it would have been obvious to one skilled in the art to employ the specific etch process parameters which are claimed by the applicant in the etching process taught above based upon *In re Aller* as cited below.

"Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F. 2d 454, 105 USPQ 233, 235 (CCPA).

Further, all of the specific process parameters which are claimed by the applicant are results effective variables whose values are known to effect both the rate, and the quality of the plasma etching process.

5. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

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6. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nallan et. al. (6,322,714).

Nallan et. al. disclose a process for anisotropically etching a polysilicon layer in a plasma, which is comprised of (Cl₂-HBr-He-O₂-NF₃). This is discussed specifically in column 10; and discussed in general in columns 1-22. This is shown in figures 1-8.

Nallan et. al. fail, however, to specifically disclose the following aspects of applicant's claimed invention:

- the specific conduction of an etching process which employs the specific etch process parameters which are claimed by the applicant

It would have been prima facie obvious to one skilled in the art to employ any of a variety of different etch process parameters in the etching process taught above including those which are specifically claimed by the applicant. These are all well known variables in the plasma etching art, which are known to effect both the rate and the quality of the plasma etching process. Further, the selection of particular values for these variables would not necessitate any undue experimentation, which would have been indicative of unexpected results.

Alternatively, it would have been obvious to one skilled in the art to employ the specific etch process parameters which are claimed by the applicant in the etching process taught above based upon *In re Aller* as cited below.

"Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F. 2d 454, 105 USPQ 233, 235 (CCPA).

Further, all of the specific process parameters which are claimed by the applicant


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are results effective variables whose values are known to effect both the rate, and the quality of the plasma etching process.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Any inquiry concerning this communication should be directed to examiner

George A. Goudreau at telephone number (571)-272-1434.


George A. Goudreau
Primary Examiner
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